REMARKS

Claims 1, 2, and 4-12 remain in the application, claims 3 and 13-16 having been canceled and the remaining claims editorially amended. Reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

The examiner previously rejected all of claims 1-12 for anticipation by Hino (US 6172976). Applicants traversed the rejection of claims 1-12, and added new claims 13-16. The examiner has now repeated his rejection of claims 1-12 and has added a rejection of claims 13-16 for obviousness over Hino in view of Casile et al (US 6769026). These rejections are respectfully traversed.

As described at page 4 of the present application, the layered structure of connection control includes a call control layer represented by the service control modules, a connection control layer beneath the call control layer, and a device handler layer beneath the connection control layer. For a call to be set up, a service control module sends a request to a connection control module, the service interface handler (e.g., SIH1) in the connection control module creates a physical device interface handler (e.g., PDIH1) in the connection control module for the purpose of interfacing with the device handling layer. The physical device interface handler then communicates with the device handling layer and ultimately ends up seizing a device driver (e.g., DD1), and then acknowledgement messages are sent back up the chain to the service control module to let it know that the physical connection had been made.

Thus, the connection control module sits in a connection control layer between the service control layer and device handling layer and communicates with each. As described in the paragraph beginning at line 19 of page 4, if the call is a full call the service layer functions as a call control layer. But the present invention allows a connection control module to handle a half call, which can connect to another half call handled by another connection control module, and this is facilitated by allowing two connection control modules to communicate with one another. In the example described at pages 6-7 of the specification, the modules Sc1a, SIH1 and PDIH1 cooperate to set up a half call including the seizing of a device driver DD1, and the modules SC2a, SIH2 and PDIH2 similarly cooperate to set up a half call including the seizing of a device driver DD2. Once this is done, connection of the two half calls is then accomplished by one of the service control modules (e.g., SC1a) sending an LRM message to its respective service interface handler (e.g., SIH1), which then communicates with the other service control module by exchange of messages LRM1 and LRM2.

Turning now to Hino, Fig. 1 illustrates acknowledged prior art but the components are similar to the Hino inventive circuit and are more clearly described. As described beginning at line 61 of column 1, terminal 241 requests service control unit 101 (through circuit controller 211) for a service, and service control unit 101 selects a proper procedure through service controller 801 and instructs the service implementation device to implement the procedure selected by the service controller 801. As described beginning at line 13 of column 2, the service common management controller responds to a request from the service controller 801 to communicate with various apparatus through the apparatus control interface 211. Thus, in the

arrangement of Fig. 1, the service controller issues the service request to the connection

controller and is analogous to the service control module of the present invention, the service

common management controller 821 responds to the service request by controlling an apparatus

handler, and thereby corresponds generally to the connection control module of the present

invention, and communication between the connection control module and the physical devices

is via apparatus control interface which generally corresponds to the physical device interface

handler PDIH1 of the present invention.

As described at lines 62-67 of column 2, a problem sought to be addressed by Hino is the

need to substantially reprogram the service common management controller when a new

connection is added. A comparison of Figs. 1 and 3 shows that the solution to this problem is to

replace the service common management controller 821 of Fig. 1 with multiple control interfaces

271-275, respective controllers 121, 122, 131, 141 and 151 and respective controller-use

memories, each dedicated to a different type of connection, thereby minimizing the need to

modify the contents of the service common management controller each time a different type of

connection is to be added.

As described at lines 1-6 of column 3, a second problem to be addressed is that

implementation of a service that needs to be implemented across a plurality of service control

units 101 is over cumbersome. The solution provided to this by Hino is, in part, allowing a

plurality of service control units to communicate with one another. While this may be generally

relevant to the present invention, the result is far different.

The communication in Hino between plural service control units is illustrated in Fig. 8 the description of which begins at the bottom of column 23. What is immediately apparent is that the three service control units 701, 702 and 703 include amongst them only a single service controller 741. Thus, whereas the present invention contemplates independently operable and self-sufficient connection control modules that can communicate with one another to expedite a common task, Hino teaches an arrangement wherein the connection control modules communicate with one another because they have to because they are not complete and independently operable, i.e., there is only one service controller 741 shared amongst them.

The claims have been amended to more completely reflect the interaction between two connection control modules in a switching node, describing the first service module, first service interface and first physical device interface cooperating to establish a connection to a first physical device, a similar cooperative arrangement of a second service control module, second service interface module and second physical device interface module in setting up a connection to a second device, and the a communication path between the connection control modules to permit that two half calls to be linked together more efficiently. This arrangement of components/elements is neither shown nor suggested in Hino, nor does the secondary art make up for this deficiency. Accordingly, all claims are believed to patentably distinguish over the art.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

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Respectfully submitted,

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